

Claims

WHAT IS CLAIMED IS:

1. - 7. (canceled)
8. (new) A metering device for flowable products, the metering device comprising:
 - a metering cylinder;
 - a valve cylinder coaxially arranged in the metering cylinder, wherein an annular chamber is defined between the metering cylinder and the valve cylinder;
 - a ring-shaped metering piston movable in the annular chamber between an upper intake position and a lower dispensing position;
 - wherein the metering piston divides the annular chamber into an upper part and a lower part, wherein the upper part is configured to be connected to a product reservoir and the lower part forms a metering chamber;
 - a mouthpiece closing off a bottom side of the metering cylinder and having a coaxial cylindrical dispensing opening;
 - a valve piston as an integral part of the valve cylinder, wherein the valve piston is axially movable between a lower closing position in which the valve piston is positioned within the dispensing opening for closing the dispensing opening and an upper release position releasing the dispensing opening;
 - a supply cylinder surrounding the metering cylinder, wherein the metering cylinder is arranged coaxially in the supply cylinder and wherein between the metering cylinder and the supply cylinder a supply chamber is formed;
 - wherein the supply cylinder has an upper end configured to be connected to the product reservoir;
 - wherein the metering cylinder is axially movable from a lower closing position, in which a lower end of the metering cylinder closes off the metering chamber relative to the supply chamber by engaging the mouthpiece, into an upper opening position, in which the metering chamber communicates with the supply chamber via a supply opening between the lower end of the metering cylinder and the mouthpiece.

9. (new) The metering device according to claim 8, wherein the valve piston and the metering cylinder are axially movable into an upper service position, respectively, and wherein the metering piston is axially moveable into a lower service position.

10. (new) The metering device according to claim 9, wherein the valve piston when in the service position is retracted completely into the metering cylinder and the valve piston and the metering cylinder are positioned at a spacing above the metering piston.

11. (new) The metering device according to claim 9, wherein the metering cylinder when in the service position is located in a position that is above the upper opening position.

12. (new) The metering device according to claim 9, wherein the metering piston when in the service position is located above the mouthpiece without contacting the mouthpiece.

13. (new) The metering device according to claim 8, wherein the metering piston, the metering cylinder, and the valve piston form a metering unit, wherein the mouthpiece is axially movably and seal-tightly supported in a lower end area of the supply cylinder and is axially movable together with the metering unit from an upper initial position into a lower dispensing position.

14. (new) The metering device according to claim 13, wherein the valve piston is movable upwardly into a release position when the metering unit is secured in the lower dispensing position of the metering unit.